REPLY BRIEF

In Re United States Patent Application of

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Serial Number

10/071,494

Filed

February 6, 2002

Titled

Field Transistors for Electrostatic Discharge Protection and Methods for Fabricating the Same

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Examiner: Victor A. Mandala, Jr.

Art Unit: 2826

STATUS OF CLAIMS

Claims 1-41 are pending in the application.

Claims 11-18 and 30-39 are withdrawn from consideration as being directed to a non-elected invention.

Claims 1-10, 19-29, and 40-41 stand rejected.

The rejection of claims 1-10, 19-29, and 40-41 is on appeal.

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

1. Whether the Examiner has substantiated that claims 1-10, 19-29, 40, and 41 are indefinite under 35 U.S.C. § 112, second paragraph, for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention.

2. Whether the Examiner has substantiated that claims 1-4, 7-10, 19, 23, 26, 27, and 29 are anticipated under 35 U.S.C. § 102(b) by U.S. Patent No. 5,623,154 to Murakami et al. ("Murakami et al.").

ARGUMENT

In the Examiner's Answer (the "Answer") dated May 18, 2007, the Examiner raises four new arguments that will be addressed in this Reply Brief.

1. On pages 9-10 of the Answer, the Examiner cites a single legal decision supporting his position that the negative limitation recited in the claims (i.e., no thin gate oxide layer) is not considered definite.

2. On page 11 of the Answer, the Examiner argues that a definite definition of "thin" gate oxide layer can not be determined because such a definition has been changing so rapidly.

3. On page 12 of the Answer, the Examiner argues that the Affadavit has not been entered—and therefore not considered---because it has not been shown why it was not presented earlier and that the Affidavit is not sufficient.

4. The Examiner indicates on page 11 of the Answer that U.S Patent No. 6,586,306 does not support Applicant's argument of definiteness because that patent, unlike the present application, contains a "definite definition for the terms thin and thick because a reference point has been established which can be defined by the thin gate oxide has less of a thickness than the thick gate oxide...."

But none of these new arguments support the Examiner's rejection of the claims under 35 U.S.C. § 112 ¶2 or 35 U.S.C. § 102(b).

1. A Negative Limitation is Not Necessarily Definite

The Examiner compares the findings of *In re Schechter*, 205 F.2d 185, 98 USPQ 144 (CCPA 1953) with *In re Wakefield*, 422 F.2d 897, 899, 904, 164 USPQ 636, 638, 641 (CCPA 1970) and contends that the facts in the present application are more like *In re Schechter* than *In re Wakefield.* Accordingly, the Examiner argues that the negative limitation of no thin gate oxide layer is indefinite under 35 U.S.C. § 112 ¶2.

Interestingly, the Office's own guidelines do not stop at a mere comparison of these two decisions. The Manual of Patent Examining Procedure (M.P.E.P.) discusses the definiteness of negative limitations at length in section 2173.05(i). In that section, the M.P.E.P. notes that the "current view of the courts is that there is nothing inherently ambiguous or uncertain about a negative limitation." *See MPEP § 2173.05(i).* All that is required is that the boundaries of the patent protection sought are set forth definitely, albeit negatively. *Id.* This section notes that "some older cases were critical of negative limitations" and cites to the same decision relied on by the Examiner, *In re Schechter*. But, consistent with the "current view" of the courts, this section of the M.P.E.P. cites two recent decisions where a negative limitation was held to be definite, *In re Wakefield* and *In re Barr*, 444 F.2d 588, 170 USPQ 330 (CCPA 1971). *Id.* This section of the M.P.E.P. does note that any negative limitation must have a basis in the original disclosure. *Id.*

From this section of the M.P.E.P., 2 requirements about negative limitations can be distilled. First, any negative limitation must have a basis in the original disclosure. And second, claims are not indefinite so long as the boundaries of the protection are set forth, even if negatively.

The present claims meet both of these requirements. First, the limitation of no thin gate oxide layer is explicitly described in paragraph [33] of the specification, not to mention the discussion in paragraphs [07-08] and [32]. And second, the boundaries of the protection are set forth in the claims, even though they are claimed in the negative sense. Indeed, the claim limitation here complies with the line of legal precedent holding that negative limitations are definite when they are used to distinctly describe an invention. *See, e.g., In re Banowski*, 318 F.2d 778, 783 (C.C.P.A. 1963); *In re Duva*, 387 F.2d 402, 407-408 (C.C.P.A. 1967); *Ex Parte*

Hradcovsky & Kozar, 214 U.S.P.Q. 554, 555 (Pat. & Trademark Off. Bd. App. 1982); and *In re Marosi*, 710 F.2d 799, 802-803 (Fed. Cir. 1983).

2. A Thin Gate Oxide Layer has not Been Shown to be Indefinite in Light of Technology Trends

On page 11 of the Answer, the Examiner concludes that a definite definition of a thin gate oxide layer from the prior art can not be determined since the definition (the thickness of a thin gate oxide layer) has been changing so rapidly. The Examiner's argument unfortunately misses the point.

Applicant cited to this technology trend to illustrate that the thickness of a thin gate oxide layer might change over time and, therefore, any difference in thickness mentioned in 2 patents issued about 30 years apart has no bearing on indefiniteness. The fact remains that the appropriate time frame for inquiring about indefiniteness is at the time of the invention. In the present application, the time of the invention is near the effective filing date of the application, or early 2001. But the Examiner has not shown that despite the trend of technology in the semiconductor art, the skilled artisan would not have understood the metes and bounds of a thin gate oxide layer in early 2001. At the same time, Applicant has submitted evidence in the form of U.S. Patent No. 6,586,306 which has an effective filing date near this time, which contains a claim for making a semiconductor device, including forming a "thin gate oxide layer," and which contains no numerical range for "thin" in its specification. And since that patent was considered to contain definite claims, so too must the present application.

3. The Affidavit Was Submitted Properly and Must be Considered

On page 12 of the Answer, the Examiner indicated that the 37 C.F.R. § 1.132 Affidavit was not entered and not considered because it did not provide good and sufficient reasons why it was necessary and not earlier presented. The Examiner also indicated that the Affidavit does "not provide any reason what the particular subject matter is that the skilled artisan would provide and its clarity to the arguments at hand, hence viewed as is open ended and insufficient."

The 37 C.F.R. § 1.132 Affidavit (the "Affidavit") was not submitted earlier because of the purpose for which it was filed. A brief explanation of the relevant prosecution history helps illustrate its timeliness.

Claims 40 and 41 in the present application were amended on December 9, 2004, as follows:

> 40. (currently amended) A semiconductor device for electrostatic discharge protection, the device comprising a field transistor having both a source region and a drain region overlapped by a gate conductive layer and having a current path between the source region and the drain region while containing no thin gate insulating layer.
>
> 41. (currently amended) A system for electrostatic discharge protection, the system comprising a field transistor having both a source region and a drain region overlapped by a gate conductive layer and having a current path between the source region and the drain region while containing no thin gate insulating layer.

These amendments were submitted in response to the Examiner's rejection of these 2 claims (40-41) under 35 U.S.C. § 112 ¶1 as not being enabled. *See page 2, Office Action dated August 19, 2004.*

In reply to these amendments, the Office then newly rejected claims 40 and 41 under 35 U.S.C. § 112 ¶2 as being indefinite. *See page 2, Office Action dated March 28, 2005.* The Examiner made this Office Action final. Applicant's first opportunity to submit evidence

rebutting the new rejection of claims 40-41 under indefiniteness was, therefore, in reply to this final Office Action (which was filed on June 28, 2005). And this evidence was submitted in the form of the Affidavit to show that the skilled artisan would have understood that a "thin gate oxide layer" was reasonably clear and precise.

As to the sufficiency of the Affidavit, Applicant is not sure why the Examiner feels the Affidavit is not sufficient. The Affidavit directly addresses the technical reasons why a skilled artisan would have understood the metes and bounds of a thin gate oxide layer.

4. The Definition in the '306 Patent Does Not Make the Claims Indefinite

On page 11 of the Answer, the Examiner maintains that Applicant's reliance on U.S. Patent No. 6,586,306 for definiteness is misplaced because unlike the present application, the '306 Patent contains a "definite definition for the terms thin and thick because a reference point has been established which can be defined by the thin gate oxide has less of a thickness than the thick gate oxide...." The Examiner's position seems self-evident to the skilled artisan and, therefore, does not serve to differentiate between the claims of '306 Patent claims and the claims of the present application.

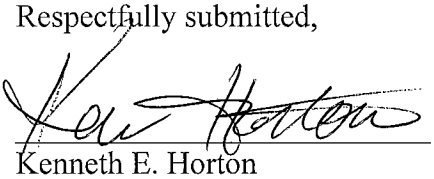
According to the Examiner, the claims in the '306 Patent are definite since they recite that a thin gate oxide has a thickness less than a thick gate oxide. But doesn't something that it is considered to be thin (i.e., a thin window) automatically have a thickness that is less than the same thing that is thick (i.e., a thick window)? In other words, doesn't a thin window automatically have a thickness less than a thick window? Since it is self-evident to the skilled artisan, such language does not serve to make the claims in the '306 Patent definite, nor the absence of such language serve to make the claims in the present application indefinite.

Conclusion

For the reasons set forth above, as well as those previously of record, Applicants respectfully request the Board to reverse the Examiner's rejections of the pending claims.

If there is any fee due in connection with the filing of this Reply Brief, including a fee for any extension of time not previously accounted for, please charge the fee to our Deposit Account No. 50-0843.

Respectfully submitted,



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